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April 21, 2004

Via Fax (916) 464-4758

Robert Schneider, Chair
Central Valley Regional Water Quality Control Board
Sacramento Main Office
11020 Sun Center Drive #200 Rancho Cordova, CA 95670-6114

Re: DO TMDL and Basin Plan Amendment

Dear Board Member Schneider:

Your staff conducted a Stakeholder Forum in Modesto on April 12 to review their proposed plan to correct the problem of inadequate dissolved oxygen (“DO”) in the Stockton Ship Channel. Attendees at the forum raised numerous basic concerns about the staff proposal. Staff acknowledged that these concerns deserve serious consideration, but noted that the plan to be submitted to you on April 23 could not be changed prior to that meeting. This letter is to inform you why we believe the staff plan would be ineffective and how the plan should be revised to achieve its purpose.

Notwithstanding the limitations placed upon the Board by Federal Statutes dealing with TMDL’s, we believe the initial focus should be to determine the physical measures which would, if implemented, most assuredly solve the problem and at least cost. Subsequent to such an assessment and the determination of the best physical solution, the Board should then fit the solution into the regulatory framework. Our analysis indicates that the proposed Basin Plan Amendment for the DO TMDL should include a minimum flow requirement in the San Joaquin River. This requirement appears to be the only practical way of solving the problem.

The DO problem in the Ship Channel would not exist if the Channel had not been enlarged. Clearly, the Channel will never be returned to its original configuration, and so the problem will not be solved by addressing this cause. Ammonia in nearby urban discharges also

contributes to the problem and can be regulated, but the data indicates that will not be sufficient

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to avoid the DO problem. If there were no algae in the inflow to the channel in excess of assimilative capacity, there would also be no problem. However, algae and the nutrients that nourish it are natural substances. They contribute to the aquatic food chain. It is not feasible to control the nutrients in the river system both time and quantity to a degree that would reduce algae growth sufficiently to have a substantial effect on the DO problem in the Ship Channel.

The remaining ways to solve the problem are providing an adequate minimum inflow to the Ship Channel or adequate aeration within the Ship Channel or a combination thereof. It has been established that the DO standard is met when there is at least an approximate 1500 cfs inflow in summer months and somewhat less in winter months.

The pounds of oxygen that would have to be introduced if the sole solution were aeration have been calculated. However, those calculations have not been corrected for assimilative capacity within the channel, and there are substantial uncertainties regarding dispersion of introduced oxygen throughout the channel, particularly in the absence of some minimum inflow. There has been no assessment of the relative cost and assurance of correcting the DO problem by aeration versus correcting it by providing an adequate minimum inflow. There has also been no examination of the fact that permanent tidal barrier operations (as proposed in CALFED's ongoing South Delta Improvement Program) and other measures that are needed and anticipated for other reasons will provide adequate inflow most of the time and could be augmented to provide it all of the time.

Development of the DO TMDL and the solution to the problem must be done in coordination with other ongoing regulatory efforts which affect flows in the San Joaquin River. As you know, a large group of interested parties are urging you to adopt a concentration based plan which is being developed for salinity control in the San Joaquin River. That plan would include measures that would increase the inflow to the Ship Channel. The flow at Vernalis would be increased, particularly in the summer, by measures that are described for you in other correspondence. The portion of the Vernalis flow that would be kept out of Old River and sent to the Ship Channel would be substantially increased both by that plan and by the South Delta Improvement Plan (per its EIR/EIS that is nearing completion). Keeping Vernalis flow out of Old River is important both for protection of salmon smolts and to largely stop the recycling of exported salt. Water exported via the Delta Mendota Canal, DMC, contains a substantial salt load. This salt is concentrated by crops and wetland water users in the CVP's westside service area, and then drains to the river. If that salt load is not kept out of Old River by the operation of permanent barriers, it flows back to the federal pumps and is re-exported. This salt also causes salinity problems within the South Delta. Furthermore, the proposed salinity control

plan will include recirculation of water from the Delta via the DMC to the river to restore flow and dilute salt, particularly in the summer. These measures could be augmented by measures now under study to provide an adequate minimum inflow to the Ship Channel under all, or nearly all conditions.

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Given the above, we recommend that the development of the TMDL and Basin Plan Amendment to implement the solution to the dissolved oxygen problem include the establishment of a minimum flow in the San Joaquin River. This should be done in collaboration with measures needed to solve the salinity problem, and problems of water depth, water quality control, water circulation, and protection of fish and local navigation throughout the channels in the South Delta.

Please call me if you have any questions or comments.

Very truly yours,

ALEX HILDEBRAND, Director
South Delta Water Agency

AH/dd

cc: Dante J. Nomellini, Esq.
Mr. Bill Jennings
Dr. Fred Lee
Tim O'Laughlin, Esq.